

WHAT IS CLAIMED IS:

- 1 1. A radio frequency transmitter configured to send radio frequency
2 messages to activate a remote system, wherein each message includes an
3 encrypted rolling value, wherein the transmitter is configured to send at least
4 two of the messages having encrypted rolling values in response to a single
5 user input, the encrypted rolling values being from a sequence of rolling values.
- 6 2. The radio frequency transmitter of Claim 1, wherein each message
7 includes a transmitter identifier.
- 1 3. The radio frequency transmitter of Claim 1, configured to send the
2 at least two messages during a training operation.
- 1 4. The radio frequency transmitter of Claim 3, configured to send at
2 least three messages having sequential encrypted rolling values in response to
3 the single user input.
- 1 5. The radio frequency transmitter of Claim 1, configured to send the
2 at least two messages each of the first N times the single user input is
3 actuated, wherein N is at least two, and thereafter to send one of the
4 messages having the next encrypted counter value in the sequence in response
5 to a single user input.
- 1 6. The radio frequency transmitter of Claim 1, wherein the
2 transmitter is configurable by a user to activate one or more of a plurality of
3 different remote systems using different radio frequency messages.
- 1 7. The radio frequency transmitter of Claim 6, configured to identify
2 at least one of the plurality of different remote systems based on a radio
3 frequency signal received from an original transmitter associated with the at
4 least one remote system.

1 8. The radio frequency transmitter of Claim 7, configured to scan a
2 plurality of frequencies to identify the frequency of the original transmitter.

3 9. The radio frequency transmitter of Claim 6, configured to identify
4 at least one of the plurality of different remote systems based on a user input.

5 10. The radio frequency transmitter of Claim 1, configured to control a
6 garage door opener.

7 11. The radio frequency transmitter of Claim 1, wherein the
8 transmitter is integrated into a vehicle interior element.

9 12. The radio frequency transmitter of Claim 1, configured to send the
10 two messages sequentially.

11 13. A radio frequency remote control system including a transmitter
12 according to any one of claims 1-12, further comprising a receiver that is
13 coupled to a garage door opener and is configured to train to the transmitter
14 based on the two messages.

15 14. The radio frequency remote control system of Claim 13, wherein
16 the receiver is configured to activate the garage door opener to move the
17 garage door in response to the two messages.

18 15. A radio frequency remote control system including a transmitter
19 according to any one of claims 1-12, further comprising a receiver configured
20 to train to the transmitter based on the sequence of the rolling value of the two
21 messages sent in response to the single user input.

22 16. A method of providing a counter value and a transmitter identifier
23 to a receiver configured to control a system, comprising:
24 receiving a single user input; and

25 in response to the single user input, transmitting a plurality of
26 sequential encrypted counter values to the receiver.

27 17. The method of Claim 16, further comprising identifying the type
28 of receiver.

29 18. The method of Claim 17, wherein the type of receiver is identified
30 based on a radio frequency signal received from an original transmitter
31 associated with the receiver.

32 19. The method of Claim 19, wherein, after the receiver is in the
33 training mode, transmitting at least three sequential encrypted counter values
34 to the receiver in response the single user input.

35 20. A radio frequency transmitter configured to send radio frequency
36 messages to activate a remote system, the transmitter configured to transmit
37 at least two sequential rolling values to the receiver based on a single user
38 input.